# CONTENTS

List of figures xv List of tables xviii List of boxes xx Preface xxii Acknowledgments xxviii

#### CHAPTER 1 Introduction: an overview of the world economy 1

Introduction 1
The scope of international economics 2
The output of the world economy 3
Imports and exports of goods in the world economy 4
International trade in services 6
Capital flows in the world economy 10
Trends in international production and trade 12
Globalization 14
Summary 17
Key concepts and terms 17
Problems and questions for review 18
Notes 18
References 19

## CHAPTER 2 Why countries trade 20

International trade versus interregional trade 21

Trade in an individual product 21

Trade based on absolute advantage 26

Absolute advantage 26

The gains from specialization and trade with absolute advantage 27

Trade based on comparative advantage 28

Comparative advantage 29

The gains from specialization and trade with comparative advantage 30

Trade based on opportunity costs 32

Opportunity costs 33

The gains from specialization and trade with opportunity costs 33

Dynamic gains from trade 34 Summary 35 Key concepts and terms 36 Problems and questions for review 36 Notes 37 References 37

#### CHAPTER 3 Comparative advantage and the production possibilities frontier 39

Introduction 39

The production possibilities frontier and constant costs 40 The production possibilities frontier 40 Production and consumption without specialization and trade 42 Production and consumption with specialization and trade 42

The terms of trade 47

Changes in the gains from specialization and trade 47 Demand conditions and the terms of trade 48 Distribution of the gains from trade 49

Trade under increasing opportunity costs 51

Increasing costs and the production possibilities frontier 51 Production and consumption without specialization and trade 54 Production and consumption with specialization and trade 54 International trade under increasing costs: an advanced analysis 58 Summary 64 Key concepts and terms 64 Problems and questions for review 64 Notes 65

#### CHAPTER 4 Factor endowments and the commodity composition of trade 67

Introduction 67

References 66

The factor-proportions theory 68 Assumptions of the factor-proportions theory 68

The factor-proportions theory 70

Factor-price equalization and the distribution of income 73

Factor-price equalization 73

Trade and the distribution of income 76

Trade and income inequality 78

The specific-factors model 80

Empirical evidence concerning the factor-proportions theory 82

The Leontief paradox 82

Explanations of the Leontief paradox 83

International trade not explained by the factor-proportions theory 85 Summary 86

Key concepts and terms 86 Problems and questions for review 87 Notes 88 References 89 Appendix 4.1: Factor-proportions theory: an advanced analysis 90

#### CHAPTER 5 Intra-industry trade 93

Introduction 93 Defining intra-industry trade 93 The increasing importance of intra-industry trade 96 Intra-industry trade in homogeneous products 98 Intra-industry trade in differentiated products 98 Economies of scale 100 The product cycle 104 Overlapping demands 106 Empirical evidence on intra-industry trade 109 The welfare implications of intra-industry trade 110 Summary 113 Key concepts and terms 114 Problems and questions for review 114 Notes 115 References 115

#### CHAPTER 6 THE FIRM IN THE WORLD ECONOMY 117

Introduction 117 The firm in international trade 118 Firm heterogeneity 118 The multinational corporation 123 The importance of MNCs 123 Reasons for the existence of MNCs 127 Offshoring and MNCs 129 Global value chains 130 Public policy toward MNCs 131 Summary 133 Key concepts and terms 133 Problems and questions for review 133 Notes 134 References 134

#### CHAPTER 7 International factor movements 136

Introduction 136 International trade versus international factor movements 137 International movements of capital 138

Reasons for the international movement of capital 139 Welfare effects of international capital movements 140 Capital movements and public policy 142 International movements of labor 143 Reasons for the international movement of labor 144 Welfare effects of the international movement of labor 146 Immigration and public policy 149 Summary 150 Key concepts and terms 151 Problems and questions for review 151 Notes 152 References 152

#### CHAPTER 8 Tariffs 153

Introduction 153 Tariffs: some preliminary details 153 Types of tariffs 154 Methods of valuing imports 155 Welfare effects of trade in an individual product 156 Consumer and producer surplus: a review 156 The effects of free trade 158 The economic effects of tariffs 161 The effects of a tariff for a small country 161 The effects of a tariff for a large country 163 The effective rate of protection 166 Arguments for tariffs 168 Infant government 169 National defense 169 Infant industries 171 Senile industry protection 171 Tariffs, trade, and jobs 173 Summary 174 Key concepts and terms 175 Problems and questions for review 175 Notes 176 References 176

#### CHAPTER 9 Nontariff distortions to trade 177

Introduction 177 Nontariff barriers to trade 178 Quotas 179 The economic effects of a quota 182 Other nontariff distortions 185

Industrial policy 186 Technical barriers to trade 187 Subsidies 189 Government procurement 189 Corruption and international trade 190 Economic sanctions 192 Labor and environmental standards 193 Transportation costs and trade 196 The gravity equation and international trade 199 Summary 200 Key concepts and terms 201 Problems and questions for review 201 Notes 202 References 202

#### CHAPTER 10 International trade policy 204

Introduction 204 The political economy of protectionism 205 Protectionism and public choice 205 The structure of protection 210 The evolution of U.S. trade policy 212 The formulation of U.S. trade policy 214 Antidumping, countervailing duties, and safeguards 215 Antidumping 216 Types of dumping 216 History of antidumping law in the United States 217 Countervailing duties 218 Safeguards 219 The General Agreement on Tariffs and Trade (GATT) 220 GATT and multilateral trade negotiations 220 The World Trade Organization (WTO) 223 The future of international trade negotiations 223 Summary 226 Key concepts and terms 227 Problems and questions for review 227 Notes 227 References 229 Appendix 10.1: Price discrimination 230

### CHAPTER 11 Regional economic arrangements 231

Introduction 231 Degrees of economic integration 232 Rules of origin in international trade 235 Trade effects of economic integration 236 The static effects of a customs union 238 The European Union 241 NAFTA and other U.S. trade agreements 244 NAFTA 245 Other U.S. trade agreements 246 Multilateralism versus regional trade agreements 248. Summary 251 Key concepts and terms 252 Problems and questions for review 252 Notes 253 References 253

#### CHAPTER 12 International trade and economic growth 255

Introduction 255

The developing countries 256

Economic development 256

GDP of developing countries 256

Economic growth 258

Preconditions for growth 258

Economic growth and the factors of production 260

Basic growth theory 261

Changes in capital stock and technology 262

International trade and economic growth 263

Openness and growth 263

Capital flows, technology transfers, and economic growth 265

Economic development strategies 266

Primary products 267

Import substitution 271

Export promotion 273

Official development assistance 277

The role of official development assistance 277

Flows of official development assistance 278

Multilateral development organizations 279

The World Bank and regional development banks 280

The United Nations agencies 281

Summary 281

Key concepts and terms 282

Problems and questions for review 282

Notes 282

References 283

#### CHAPTER 13 National income accounting and the balance of payments 284

Introduction 284

National income accounting 285

The measurement of GDP 285

Items excluded from GDP 285

GDP and changes in prices 286

The components of GDP 286

GDP and the trade balance 288

GDP in a closed economy 288

GDP in an open economy 289

Imports, exports, and GDP 289

Intertemporal trade 290

Saving, investment, the government budget, and the trade balance 291

Adjustments to trade imbalances 292

The balance of payments accounts 295

The balance on current account 295

The balance on capital and financial accounts 301

Summary 304

Key concepts and terms 304

Problems and questions for review 305

Notes 305

References 306

#### CHAPTER 14 Exchange rates and their determination; a basic model 307

Introduction 307

Exchange rates 307

The demand for foreign exchange 310

Shifts in the demand for foreign exchange 311

Changes in domestic income 311

Changes in relative prices 313

The supply of foreign exchange 314

Shifts in the supply of foreign exchange 315

Changes in foreign income 315

Changes in relative prices 316

Equilibrium in the foreign exchange market 317

Changes in the equilibrium exchange rate 318

Exchange rate volatility and international trade 321

Exchange rate pass through 321

Price levels and the exchange rate in the long run 324

The law of one price 324

Purchasing power parity 328

Absolute purchasing power parity 329 Relative purchasing power parity 329 Purchasing power parity in the short run and the long run 330 The real exchange rate 334 Changes in the real exchange rate 338 Summary 341 Key concepts and terms 342 Problems and questions for review 342 Notes 343 References 344

### CHAPTER 15 Money, interest rates, and the exchange rate 345

Introduction 345 Money defined: a review 346 The supply of money 347 The demand for money 350 The equilibrium interest rate: the interaction of money supply and demand 351 The interest rate and the exchange rate in the short run 356 Interest rates, the exchange rate, and the balance of payments 362 Summary 366 Key concepts and terms 366 Problems and questions for review 366 Notes 367 References 368 Appendix 15.1: The relationship between the monetary base and the money supply 368 Appendix 15.2: Interest parity and covered interest arbitrage 369

### CHAPTER 16 Open economy macroeconomics 371

Introduction 371 Aggregate demand and aggregate supply: a review 372 Aggregate demand 372 Changes in aggregate demand 373 Aggregate supply 377 Changes in aggregate supply 378 Aggregate equilibrium 382 Determinants of the current account 383 Exports 383 Imports 384 Exchange rate changes and equilibrium output in an open economy 386 Exchange rate appreciation 387 Exchange rate depreciation 390 Exchange rate shocks 392

Summary 396 Key concepts and terms 397 Problems and questions for review 397 Notes 398 References 399

### CHAPTER 17 Macroeconomic policy and floating exchange rates 400

Introduction 400 Fiscal and monetary policy 400 Changes in fiscal policy 401 Expansionary fiscal policy 401 Contractionary fiscal policy 406 Changes in monetary policy 409 Expansionary monetary policy 410 Contractionary monetary policy 414 Monetary and fiscal policy in an open economy 418 Consistent policy mixes 420 Inconsistent policy mixes 421 Trade flow adjustment and current account dynamics 424 Summary 425 Key concepts and terms 426 Problems and questions for review 427 Notes 427 References 428

## CHAPTER 18 Fixed exchange rates and currency unions 430

Problems and questions for review 459

Notes 460 References 460

Introduction 430 Inconvertible currencies 431 Difficulties associated with exchange controls 433 Intervention in the foreign exchange market 437 Macroeconomic adjustment under fixed exchange rates: Part 1 440 Macroeconomic adjustment under fixed exchange rates: Part II 442 Fiscal policy and internal balance 444 The effects of expansionary and contractionary fiscal policy 446 Sterilization 450 Pegging the exchange rate with monetary policy 452 Currency unions 453 The trilemma 454 The European Monetary Union 455 Summary 458 Key concepts and terms 459

#### CHAPTER 19 International monetary arrangements 461

Introduction 461

The gold standard 462

The gold standard and monetary policy 462

The macroeconomics of the gold standard 463

Costs and benefits of the gold standard 465

The Bretton Woods system and the International Monetary Fund 466

The Bretton Woods System 467

The International Monetary Fund 468

The demise of the Bretton Woods System 469

The post-Bretton Woods era 470

Clean floats 470

Fixing the exchange rate 471

Options for international monetary reform 473

Summary 476

Key concepts and terms 477

Problems and questions for review 477

Notes 478

References 478

### CHAPTER 20 Capital flows and the developing countries 479

Introduction 479

Capital flows to developing countries 480

Debt versus equity 480

Servicing foreign debt 482

Exchange rate shocks 483

Macroeconomic consequences of exchange rate shocks 484

Sources of exchange rate shocks 486

Commodity price shocks 486

Exchange controls 488

Intervention, capital flights, and defaults 490

The IMF and developing countries 494

IMF conditionality 494

The future of the IMF 496

Summary 498

Key concepts and terms 499

Problems and questions for review 499

Note 500

References 500

Appendix: GDP, population, and exports for U.S. regions and states, 2018 501

Glossary 509

Index 518